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PRODUCT CATALOG / Grinding Jars

Zirconia Milling Jar

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TENCAN / PRODUCT INFORMATION

Zirconia Milling Jar

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A ceramic milling jar for applications where steel contact is undesirable.

Overview

A ceramic milling jar for applications where steel contact is undesirable. Its selection should consider the proposed zirconia grade, liquid compatibility, jar dimensions and the sample’s contamination limits.

How it works

The jar working surface forms part of the contact system between sample, media and mill. Material selection should balance the required mechanical action with chemical compatibility and the acceptable contribution from wear.

Ceramic wear can still introduce zirconium-containing material. Zirconia is the ceramic oxide; it should not be confused with metallic zirconium.

Key features

- Published dimensions include external diameter, internal diameter and height by nominal

volume.

- The jar is a ceramic component and needs protection from impact and thermal shock.
- Jar and media materials should be selected together for the intended analysis.

Specifications

Published catalog references are reproduced below. Nominal volume is not a sample-mass rating. Confirm the selected model, material grade, electrical supply and complete supplied configuration in the quotation.

Published dimensions and configurations — 1

Model / nominal volume	External diameter (mm)	Internal diameter (mm)	Height (mm)
50mL	55	38	67
100mL	65	50	75
250mL	92	74	88
500mL	100	84	118
1L	128	108	148.5
1.5L	132	112	175.5
2L	158	138	162
2.5L	158	138	192
3L	158	138	220
4L	205	175	231
5L	192	170	254

Applications

Ceramic, battery-material, pigment and other materials-development trials requiring evaluation of steel-free contact surfaces.

Suitability depends on the actual sample, process and analytical requirements; a listed application is not a guaranteed final-particle-size result.

Accessories and options

Specify volume, clamping envelope, lid/seal and the required ceramic grade. A material name alone does not confirm a vacuum rating.

State the required grade, quantities, drawings and destination when requesting a quotation. Confirm what is included, the document requirements, packing and commercial terms; no generic delivery time or universal custom capability is assumed.

Compare milling jars · Compare grinding media · Air-cooled systems · Ultrasonic-assisted systems

Selection guidance

Match zirconia ceramic to the sample chemistry and the elements or residues that matter to the analysis. Then confirm the dimensions, complete loaded mass and operating arrangement against the selected mill.

Work through the selection guide · Request a configuration quotation

Trials and comparisons

Material/application reference

Copper powder

XQM-0.4A · Wet milling

- Sample: 51 g
- Jar: 100 mL
- Recorded sampling / duration: 60 min

Recorded observations

Observation	Sampling time	D50 (µm)	D90 (µm)
Recorded sample	60 min	9.88	15.28

The product information uses an unqualified zirconium-jar shorthand. It does not identify this jar part number or certify a zirconia grade. The exact XQM-0.4A model is recorded. No starting distribution or measurement method is supplied. D90 15.28 µm does not demonstrate that all particles were below the requested 10 µm limit.

How to plan a fair comparison

For a zirconia ceramic comparison, use matched sample portions and the same measurement/dispersion method. State the jar, media, mass/volume loading basis, processing

schedule and contamination measurements. A change in material grade alone is not established as the cause of a result.

These anonymous records are not operating instructions. Measurement and dispersion methods are not fully specified in the test summaries; results apply to the reported samples and conditions.

Discuss a matched sample evaluation

Plan your milling configuration.

TENCAN develops and manufactures planetary milling equipment, with application support in Changsha and a production base in Wushi, Hunan.
Share your material, batch size, target particle size and contamination limits. Our team can help confirm the mill, jars, media and electrical requirements, or arrange a sample grinding evaluation.
Reference information applies to the described models and conditions. Confirm the final specification and supplied accessories with TENCAN before ordering.
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Product page https://www.planetaryballmill.com/milling-accessories/jars/zirconia.html
Sample grinding www.planetaryballmill.com/sample-testing/